

# THE MIDLAND COUNTIES RAILWAY BASIN AND COKE STORE AT LONG EATON

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## HISTORY

### **Origins of the Midland Counties Railway**

The Midland Counties Railway was one of the three railway companies that converged on Derby in 1839–1840, and led to the town becoming a major railway centre. It linked Derby and Nottingham to Leicester and Rugby, and by connecting to the London and Birmingham Railway and the North Midland Railway, provided the first through route from the capital to the North of England<sup>1</sup>.

However, the Midland Counties Railway was originally conceived with much more local traffic in mind. Since the construction of the Erewash and Cromford canals and the Soar Navigation in the late 18<sup>th</sup> century, coal from Derbyshire and Nottinghamshire had found a ready market in Leicester, but the competitive position changed with the opening in June 1832 of the Leicester and Swannington Railway, which provided a low cost transport route from the West Leicestershire collieries for the first time. The first prospectus for the Midland Counties Railway, published in October 1832 was for a railway from Pinxton to Leicester, with branches to Derby and Nottingham and an extension southwards from Leicester as secondary objectives. Pinxton was the natural destination in the Erewash Valley as it was already the junction between a branch of the Cromford Canal and the Mansfield and Pinxton Railway, opened in 1819.

It was three years before a bill to obtain powers to construct the railway was submitted to parliament in November 1835. The scheme had evolved to focus on the Midland Counties Railway's role as part of the emerging national railway network, but the Erewash Valley remained as one of the objectives. The plans were for a railway running from Rugby through Leicester and Loughborough to a three-way junction just north of the River Trent in Long Eaton, with lines from there to Derby, Nottingham and Pinxton. When the proposals were debated in Parliament, there was considerable opposition to the Erewash Valley route from the Borough of Derby and the North Midland Railway, who foresaw the line being extended through Alfreton to Clay Cross to provide a route to the north by-passing Derby.

As a result, the Midland Counties Railway Act as finally authorised in June 1835, excluded the Pinxton line, cutting the railway off from its original objective, the Erewash Valley coalfield.

### **Construction of the basin, Coke Store and house — 1840**

With the railway up the Erewash Valley no longer possible, an alternative means for the Midland Counties Railway to connect to the coalfield was to provide a interchange point with the Erewash Canal where the railway crossed the canal in Long Eaton. The first mention of this possibility is in the minutes of the company's Committee of Works

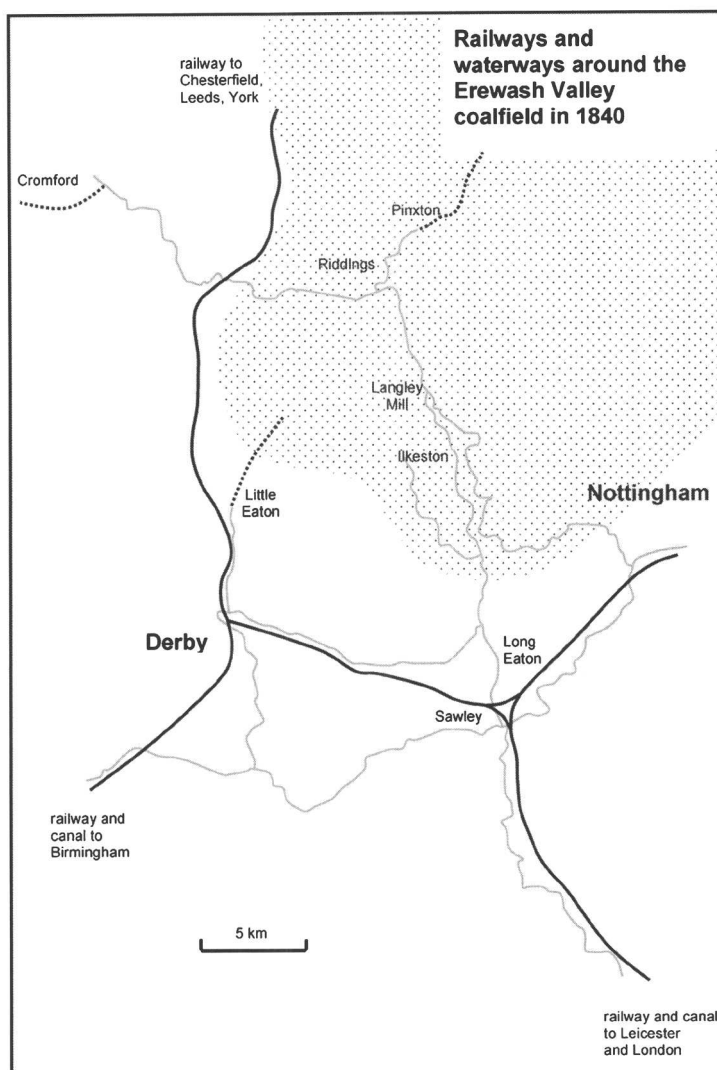


Fig. 1: Railways and waterways around the Erewash Valley coalfield in 1840.

North of Trent. At a meeting on 8 October 1839, Mr Woodhouse, the assistant engineer, was asked to recommend the quantity of land to be purchased with a view to making a wharf adjoining the Erewash Canal<sup>2</sup>.

This was at a relatively late stage in the construction of the railway, as the line between Derby and Nottingham was already open. One of the considerations which prompted the decision to connect to the Erewash Canal was the company's need to transport coke to fuel its own locomotives. About 100 tons a month was being consumed to run the service between Derby and Nottingham<sup>3</sup>, and this would increase greatly when the route to Leicester and Rugby opened in 1840. The company had constructed a coke store with a cast iron structure covering it at Derby<sup>4</sup>, and owned

its own coke ovens on land rented from James Oakes at Riddings on the Pinxton branch of the Cromford Canal<sup>5</sup>. Oakes was the owner of Alfreton Ironworks and the associated collieries which provided suitable coal for coking, and was also the Vice-Chairman of the Midland Counties Railway board. The locomotive workshops and running shed at Derby backed onto the Derby Canal, so there was a direct canal route available, but as this involved three separate canal companies, the Cromford, Erewash and Derby Canals, the tolls paid for carriage of the coke would be high. No doubt Oakes and the other railway company directors resented having to pay these tolls to the canals that they had promoted the railway to compete with.

At the next meeting of the North of Trent Committee on 5 November, it was ordered that 2 acres of land be purchased for making a Wharf adjoining the Erewash Canal<sup>6</sup>, but the landowners seem to have initially been reluctant to sell. On 15 January 1840 the company invoked the compulsory purchase provisions of their Act of Parliament to take the land required from Mr Chamberlain Hopkins and the Erewash Canal Company<sup>7</sup>. On 18 February it was decided to increase the amount of land to be taken from 2 acres to 4 acres<sup>8</sup>, and at the same meeting it was agreed that “the plan now laid before the Committee by Mr Woodhouse for the formation of a Basin adjoining the Erewash Canal and the erection of a Coke Store in connection therewith at Long Eaton with the modifications now suggested be approved and that they be at once let and proceeded with”<sup>9</sup>.

On 24 March 1840 tenders were received “for the erection and construction of a Coke Store Basin and Bridges over the entrance to the basin retaining walls etc at Long Eaton”. There were three tenders received. Two of them were from Henry Sharp and William Mackenzie who had been the contractors for the Long Eaton-Nottingham and Derby-Loughborough sections of the railway, but the cheapest offer was from a Mr Dale who undertook to construct the works for £3,233.10s.0d, well under the sum of £3,593.16s.8d which the company’s engineer Woodhouse had estimated<sup>10</sup>.

Construction was rapid; a first payment of £1,000 to Dale for work completed was approved on 2 June, further interim payments on 14 July and 12 October, and a final payment on 23 November<sup>11</sup>.

Meanwhile, it was also decided “that a house be built at the Wharf at Long Eaton for the use of the Clerk”<sup>12</sup>. Plans for “the House etc at the Long Eaton Depot” were approved and contract let to Messrs Drury & Son of Loughborough on 2 June 1840<sup>13</sup>, and payment of £800 for completion of “Merchandise Sheds and Wharfinger House at Long Eaton” was approved by the Finance Committee on 23 November 1840.

The final item relating to construction in the company’s minutes is a payment of £31.19s.4d to Marshall Barber and Co. for “Hoisting apparatus for Long Eaton coke stores” on 20 January 1841<sup>14</sup>.

The surviving construction plans for the Midland Counties Railway date from the letting of contracts in 1837–1838 and do not show the basin and Coke Store. The first map to depict the site is a deposited plan of 1847 for the construction of additional railway junctions in the area. This gives a good depiction of the basin, house, and a building labelled “coke stores”<sup>15</sup>.

The railway track layout shown includes two sidings parallel to the main line on the railway embankment, and a track descending to sidings with run-round loops on each

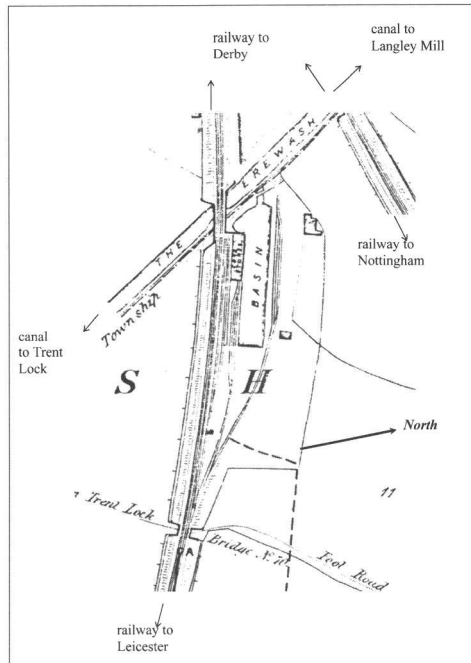


Fig 2: Long Eaton basin and coke store in 1847.

side of the canal basin. The points at the west end of the loop on the south side of the basin are very close to the coke store building, which suggests that this track extended inside the building from this end.

By the time construction was complete the Midland Counties Railway had spent over £8000 on the basin, Coke Store, house, and the coke ovens at Riddings<sup>16</sup>, all with the aim of securing a reliable supply of coke. This was justified on the grounds that early locomotives were sensitive to the quality of the fuel provided, and fuel costs were over one third of the total running cost of the locomotive department of the railway<sup>17</sup>.

### Midland Counties Railway operations — 1840–1844

Whilst construction was under way, arrangements were made to appoint a Clerk or Manager for the site. The job was first offered on 28 April 1840 to a Mr Swanwick “under the peculiar circumstances of his case at a Salary of £130 per annum with the house rent free and coals”<sup>18</sup>. This generous offer<sup>19</sup> was apparently not accepted, because on 2 June the job was offered to a Mr Fletcher of Bath at only £75 per annum<sup>20</sup>. Henry Fletcher accepted the job<sup>21</sup>, and in the following year the 1841 Census records him living in the house with his wife Frances. He was then 20 years old<sup>22</sup>. At the end of 1842, the railway company was in financial difficulties as a result of fierce competition with the Birmingham and Derby Junction railway, and as part of a round of staff reductions and re-allocations, Fletcher lost his job and house, and was replaced by a



Mr Lamb who was moved from the locomotive and stores department at Derby to manage the Coke Store<sup>23</sup>.

Evidence of when the basin and coke store came into use is in the records of wages paid to employees at the Coke Store in the minutes of the Finance Committee. The first mention is for £11.9.6d for wages up to 24 September 1840<sup>24</sup> and from then onwards wages of between £6 and £14/week are recorded regularly<sup>25</sup>. In the round of economies at the end of 1842, it was decided that three porters at Long Eaton Coke Store receiving 2s6d a day each would be discharged<sup>26</sup>. If this was the standard pay rate, the range of weekly wages paid out would correspond to between 8 and 20 people. The only time any of the workforce are named in the minutes is for an incident on 7 September 1842 which resulted in five members of staff being fined for “disorderly conduct at the Coke Store”. John and Thomas Jacques were each fined 5s0d, and William Hallam, Enoch Wallace and Joseph Livers were each fined 2s6d<sup>27</sup>.

Once the railway was fully open between Rugby, Leicester, Derby and Nottingham, the quantity of coke consumed was about 130–140 tons a week<sup>28</sup>, and almost all of this came from the coke ovens at Riddings and was transhipped at Long Eaton. The only reference to the handling of the coke is on 5 December 1842 when it was “ordered that a Shed be erected at the south east end of the Basin at Long Eaton for the purpose of covering the Coke stacked in sacks”<sup>29</sup>.

As well as the coke store wages, and purchases of coke from Mr Sylverwood who had the contract to provide coal and convert it into coke in the railway’s coke ovens, there are regular payments to two canal carriers for carriage of the coke from Riddings to Long Eaton<sup>30</sup>. One of the carriers, John Foulds, operated two narrow boats that were owned by the railway company<sup>31</sup>, the other, Thomas Horsley, provided his own boats.

As well as handling its own coke supplies, the railway was looking for longer-distance traffic. Evidence of this exists in the minutes of the Erewash Canal Committee for 31 March 1841, in which the canal company agreed that “all coals put upon the Railway at Long Eaton out of the Erewash Canal which are conveyed to London to pay along that canal at the same rate (namely sixpence per ton) as is now charged upon coals conveyed to London by Canal”<sup>32</sup>.

In the railway company’s own records, on 26 April 1842 it was “resolved that Lime be conveyed from Long Eaton at the same rate as Coal, adding the cost of loading at Long Eaton of 3d per ton<sup>33</sup>. On 7 March 1843 it was “ordered that the charge for conveying Coke from Long Eaton to Rugby the Company not finding Wagons be 1d per ton per mile, and 4d for loading and management, ¼d per ton additional if the Company find wagons”<sup>34</sup>.

There is an intriguing reference to coal traffic being sent in the opposite direction, from railway to canal, in the MCR Board minutes of 29 February 1844 “decided to charge 1s per ton for coal in owners wagons from Derby to Long Eaton, the owners having to arrange with and pay the companies servants for running their wagons down the incline and loading the boats in the basin off the Erewash Canal”<sup>35</sup>.

The quantity of public traffic transhipped is difficult to tell. Some data is available from the Cromford Canal permit books that record the origin and destination of boats passing to and from the Cromford Canal at Langley Mill. A sample of permits for

5 weeks in March and April 1842 showing 8 boats carrying coal (350 tons) and 1 carrying coke (15 tons) with the destination of Long Eaton may be traffic to the Midland Counties Railway basin<sup>36</sup>. Strangely, the permit book data seems to miss the coke carried for the railway company, which would be at least 600 tons over a five week period. Another indication of public traffic is in the Trent Navigation Boat Tables, which record two narrow boats registered in December 1841 and January 1842 as being “chiefly employed in carrying coal to the Long Eaton Railway Station”<sup>37</sup>.

An indication of another activity at the Coke Store was that on 1 February 1842 it was “ordered that a small forge be forthwith erected at Long Eaton Coke Store”<sup>38</sup>, and on 10 June 1844, just after the Midland Counties was merged into the Midland Railway, it was recorded that wagon repairs were being undertaken at the Coke Store<sup>39</sup>. Presumably the use of the forge was excluded from the minute of 8 February 1843, which “ordered that no fires be allowed on any account at the Coke Stores at Long Eaton”<sup>40</sup>.

### **Midland Railway amalgamation — 1844**

In 1844 the Midland Counties Railway amalgamated with the North Midland Railway and the Birmingham and Derby Junction to form the Midland Railway. The amalgamated company had the resources and the incentive to revive the plans for a railway up the Erewash Valley, obtaining an Act of Parliament in 1845 (for a nominally independent company, immediately taken over by the Midland). By July 1847 there was a direct railway connection as far as Codnor Park, and this extended to Pye Bridge and Pinxton by 1850<sup>41</sup>. In 1845 it was estimated that over half a million tons of coal was sent out from the Erewash Valley by canal, with only 500 tons transhipped to the railway, showing that the idea of transshipping at Long Eaton had never really caught on<sup>42</sup>, but from 1847 the railway could now offer a direct connection to the collieries, and it was the beginning of the end for the canal companies.

In the short term some of the coal owners used the threat of the new railway to force toll reductions by the canals. In November 1847, the Nutbrook Canal (a short branch canal off the Erewash Canal towards Shipley) allowed a reduction in their tolls from 4d to 3d/ton for traffic carried down the Nutbrook and Erewash for transhipment to the railway at Long Eaton. A rebate was granted upon 1,762 tons taken out this way in the half yearly account to March 1848<sup>43</sup>.

The amalgamation also seems to have resulted in a rapid change of policy on purchasing of coke. Unfortunately there is a gap in the detailed expenditure records between May 1844 and March 1845. Before this gap the Midland Counties Railway records show regular payments of Coke Store wages, and purchases of coke from Sylverwood at Riddings. After the gap the Midland Railway records make no mention of the Coke Store at all, but £1,600 a month was being spent with 8 suppliers of coke, based in North Derbyshire, Yorkshire and Durham<sup>44</sup>. This is probably symptomatic of the North Midland Railway being the dominant partner in the amalgamated company, with George Hudson as Chairman, and James Oakes no longer a Director.

The contract with Sylverwood to operate the coke ovens at Riddings was due to expire at the end of September 1844<sup>45</sup>, so this is the most probable date for when the coke store ceased to be used for its original purpose. Another piece of evidence to

support this date is a decision to sell the railway company's two narrow boats in November 1844<sup>46</sup>.

The site then disappears from the railway company records for 8 years. The only clue to what was going on is in the 1851 Census, which records the house at the Coke Store as occupied by Thomas Simms Smith, aged 26, who gave his occupation as "Engineer employing 25 men". He shared the house with 2 younger brothers, Frederick and William, and Elizabeth Maltby, a house servant<sup>47</sup>. However it is not clear whether Thomas Smith was working for the railway, or was a tenant renting the property.

### **Adaptive re-use from 1854**

The first mention of the Coke Store in the Midland Railway records is in the minutes of the Way and Works Committee for 19 July 1853 where it was ordered that the roofs of the Coke Stores at the Trent Junction be repaired where necessary<sup>48</sup>. It appears that by this date the building was let to a tenant, a Mr Greenshiels. At the Way and Works Committee on 10 January 1854 it was reported that he had been given 6 months notice to quit, but had offered the company a deal to give immediate possession in return for £46.10s.6d in compensation for additions and improvements made by him<sup>49</sup>. There is no indication as to what use Mr Greenshiels was making of the building.

After obtaining possession of the former Coke Store, alterations and repairs were ordered to make the building fit for use as Sheet Stores, where the railway would manufacture and repair the tarpaulins used to protect goods carried in open wagons<sup>50</sup>. This resulted in more rail traffic in and out of the site, as it was "ordered that a wire signal be placed to work from the crossover at the Coke Stores towards the Trent Junction to protect trains stopping at the Stores now used as sheet warehouses"<sup>51</sup>.

Tarpaulins were waterproofed by coating canvas with a highly inflammable mixture of linseed oil and vegetable black. The risk of fire may have been one reason why the Midland Railway decided to re-locate this department away from its main base at Derby. Less than a year after the change of use, the former Coke Store was badly damaged in a fire. A newspaper account of January 1855 quotes passengers from a passing train as describing the fire as "grand in the extreme". The fire was discovered by the Sheet Department Manager, Mr. Scott, who was living in the house on the site. The Midland fire engine was sent from Derby, but the roof fell and the fire destroyed "immense quantities of new tarpaulin sheets, oil, tar and other combustibles"<sup>52</sup>. The minutes of the Midland Railway Traffic Committee record that Mr Scott was very much burned, and it was believed that the fire was wilfully started<sup>53</sup>. After the fire Scott was awarded £13 as compensation and expenses for his injuries<sup>54</sup>. The Way & Works Committee lost no time in ordering the "reconstruction of the Building forming the Old Coke Stores at the Trent to fit it for a sheet and sack depot"<sup>55</sup>. To save time, the work was not put out to tender but was given to John Wood and George Thompson who were undertaking a variety of other construction and repair jobs for the Midland Railway at the time<sup>56</sup>. The reconstruction cost at least £1300<sup>57</sup>.

This is the last reference to the building as a Coke Store. From 1854 to 1963 the site was known as the Midland Railway Sheet and Sack Stores. The original converted building was supplemented during the remainder of the 19<sup>th</sup> Century by an impressive range of purpose built buildings, and at its peak over 200 people were employed<sup>58</sup>. One

reference in the Way & Works Committee minutes that can be related back to the former Coke Store building is in 1860, when it was ordered that “two suitable spaces in the lower room at the Sheet Stores Trent Junction be boarded over for use in painting sheets”<sup>59</sup>.

Some use of the basin for transhipment of freight between canal and railway continued into the early 20<sup>th</sup> Century. In 1966, the site was sold by British Rail. Since then the buildings, including the original Coke Store and house, have become industrial units, and the basin is used for a boatyard and moorings. It is intended to describe the Sheet Stores period of the site’s history and the later buildings in more detail in a subsequent article.

## SITE DESCRIPTION

### Location

The basin and Coke Store are part of the Sheet Stores Industrial Estate, located in the parish of Long Eaton, on the flood plain of the River Trent, to the east of the Erewash Canal, and north of the Derby-London railway. Throughout the period of railway ownership there was very poor road access to the site. The present road access is via Fields Farm Road which was constructed along the curve of the original Derby-Nottingham curve of the Midland Counties Railway, which was closed in 1967.

The railway is on an embankment about 4 metres above the level of the canal. The railway entrance to the site was at the south-east corner. From this point there were two sidings at railway level alongside the Coke Store and later buildings, and a single railway track descending steeply downhill to more sidings at canal level. The site of the high level sidings is within the boundary of the industrial estate and provides access to the south side of the former Coke Store building.

The Sheet Stores Industrial Estate is private land, and the author is grateful to Wyvern Marina and Long Eaton Boat Club for arranging access for the survey described below. The basin and the buildings can be viewed from Fields Farm Road and the Erewash Canal towpath or from passing trains.

### The basin

The basin is rectangular, 117 metres long and 21 metres wide for most of the length. At the east end adjacent to the entrance it widens on the south side to provide a “winding hole” to allow 70 foot long boats to be turned in the basin. Opposite this, on the north side of the basin there is a slipway, but this is a modern feature which was built c1970 when a boatyard was established.

The entrance to the basin from the Erewash canal, located at SK 4859 3212, is 4.5 metres wide, i.e. a similar width to the locks on the Erewash Canal. There is a bridge over the entrance, which is used both for the canal towpath and for an access road to an area of land owned by Network Rail on the south side of the Derby-London railway line.

In its present form this bridge dates from c1970. Maps and photographs before that date show that there were originally two separate bridges, a fixed bridge for the towpath and a movable bridge (referred to on maps as a “drawbridge”) for the access road. In the abutments of the present bridge, the original stone built abutments for the



Plate 1: Entrance to basin from Erewash Canal.

1840 towpath bridge can clearly be seen, together with a stone wall alongside the canal. The steel side girders of the current bridge appear to have been re-used from elsewhere, as they look much older than c1970 and appear to have been flame cut from a previous structure.

The basin is part of the Sheet Stores Industrial Estate. It is used as a boatyard and moorings for leisure craft.

### **The house**

The manager's house is located north of the basin at SK 4863 3215. It is now one of the Units of the Sheet Stores Industrial Estate. At the time of the survey it was unoccupied.

The house is rectangular in plan, approximately 13 metres wide (3 bays) by 9 metres deep, and two stories high. The roof is of a "platform" type, i.e. a truncated hipped roof with a flat section over the core of the building. The sloping parts of the roof are slated and there are prominent protruding joists under the eaves. The south façade facing the basin appears to be the front of the building with a central entrance door and a multi-paned fanlight over, under a classical style canopy. The window openings are symmetrically placed, and the frames are modern pattern replacements.

On the north side there is a similar canopy over a blocked central doorway, and a modern double doorway to one side. There are no windows or doors in the east or west facades. There is a small flat roofed single storey extension on the west side; from map evidence this appears to be original.



Plate 2: House — north elevation.



Plate 3: House — south elevation.



## The Coke Store

The former Coke Store is located at SK 4864 3209. With an adjacent later building alongside the basin it is now known as Unit 6 of the Sheet Stores Industrial estate, and is used for furniture manufacturing. A full measured survey has not been undertaken, but key features were measured and photographed on 12 July 2004 by Ian Mitchell with assistance from Peter Billson and Mary Graham.

### *Overall dimensions*

Length: 37.6 metres

Width: 8.4 metres

Height to eaves from canal: 9.2 metres

Height to eaves from railway: 5.3 metres

### *North elevation*

The north elevation abuts the canal basin. The wall is constructed of stone from the foundations up to 3.5 metres above canal level. Above this, it is constructed of red brick. The façade has seven equal bays. In the description below the bays are numbered from the east end.

At canal level there are large arched entrances (2.7 metres wide by 2.5 metres high) in bays 2 and 6. In bays 3 and 5 there are small barred windows with arched lintels (1.4 metres wide by 0.6 metre high). The large arched entrances are now infilled with a door and glazing. The sill of the entrance was originally at water level, but it has been raised with concrete blocks. The stone edging to the basin runs continuously under the entrance, i.e. the arch was not a “barge hole” allowing boats to enter the building. There are rope wear marks in the stone at the sides of the entrances similar to those seen on many canal bridges, indicating that boats were manoeuvred in the basin using ropes running into the building.

Above the join between stone and brick construction there are seven equally spaced windows. These are approximately square, with plain glazing and arched lintels. In bays 2 and 6 (above the canal level entrances) there is evidence of large arched entrances of similar size to those on the ground floor. These have been infilled with brick which is slightly more reddish colour than the rest of the wall. In bay 2 the infilling is flush with the face of the wall. In bay 6 the infilling is recessed. In the top row of stonework below the infilling there are a pair of cut-outs infilled with brick which may have been the location of supports for a former platform overhanging the canal.

There is a top row of seven equally spaced windows. These are similar in size to the two small windows on the ground floor, and similar bars can be seen on three of them. The others are blocked off with timber. In bays 2 and 6 there is a timber lintel just below the eaves. Below the lintel the brick colour is similar to that of the infilled archways below, which suggests there was once a larger opening for a hoist.

### *South elevation*

The south elevation faces the railway. There is a roadway (formerly two railway sidings) between the building and the railway boundary fence that was erected when the Sheet Stores site was sold out of railway ownership. The wall is constructed of red



Plate 4: Coke Store north elevation (composite from two photographs).



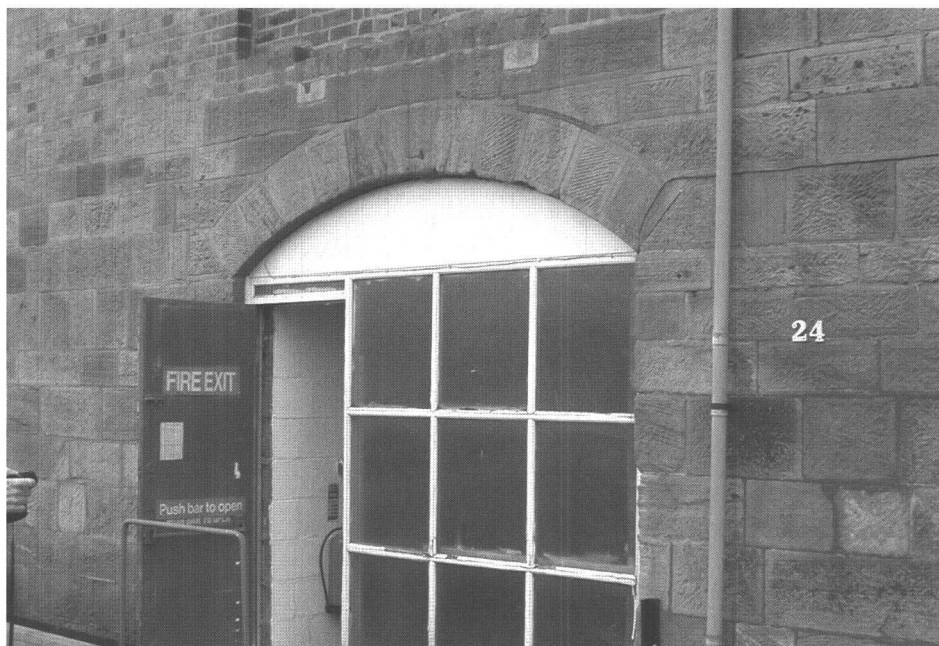


Plate 5: Coke Store north elevation — arched entrance at canal level.

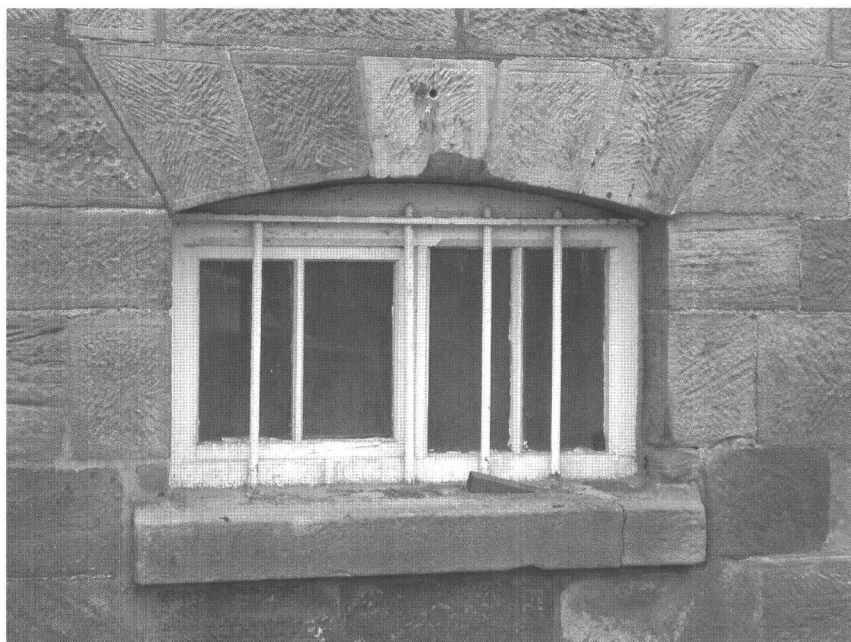


Plate 6: Coke Store north elevation — small window at canal level.



Plate 7: Coke Store north elevation — infilling in wall above arched entrance to canal.

brick, with cement rendering to a height of 2.2 metres. The same seven equal bays exist as on the north façade, but there have been several alterations during the lifetime of the building, resulting in a more irregular appearance. In the description below the bays are numbered from the east end.

There is a top row of small windows with sills 3.3 metres above ground level on this side, similar to those at the same level on the north façade. These survive but are blocked off with timber in bays 2,4,5,7, and those in bays 1 & 3 have been incorporated into much larger windows extending down to 0.7 metres above ground level. The window in bay 1 has a cast iron frame with an arched top, whilst that in bay 3 has a wooden frame with a square top. A photograph of c1920<sup>60</sup> shows bay 1 with the large window, but bay 3 in its original state. A photograph of 1965<sup>61</sup> shows large windows in both bays 1 and 3.

In bay 6 there is what appears on first sight to be a bricked up top window, but on closer examination the courses of brickwork below the lintel are continuous. Horizontal cuts have been made across the raking bricks of the lintel aligned to the mortar joints of the coursework, and then infilled with lime mortar to suggest the mortar bed runs through.

At ground level on this side, in bays 2 and 4 there are bricked up openings similar to those in bays 2 and 6 on the canal side (2.7 metres wide and 2.2 metres high with arched lintel). As on the canal side, there are square windows set in the centre of the former opening. In bay 6 there is an arched lintel in the brickwork which suggests a there was once a larger entrance 4 metres wide by 3 metres high. This is slightly offset to the east; i.e. it does not align with the even spacing in bays of the other features of the building. In bay 7 there is a small doorway with an arched lintel.

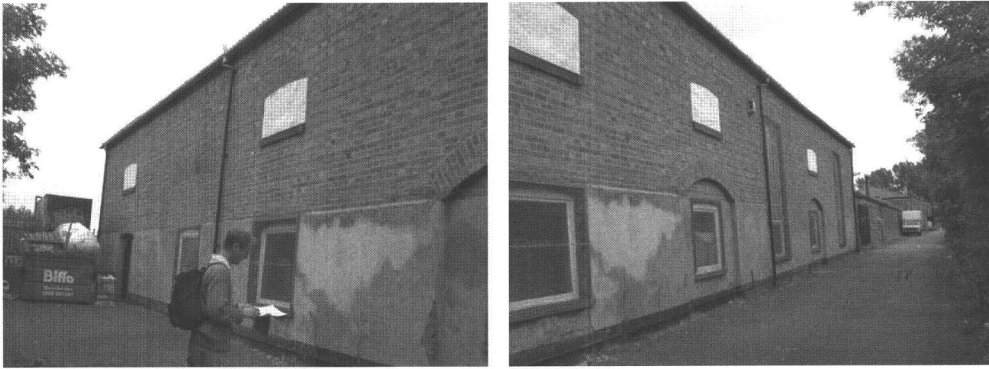


Plate 8: Coke Store south elevation — views looking west (left) and east (right).



Plate 9: Coke Store — south elevation bay 6 details.

### *West elevation*

This elevation is alongside the winding hole at the west end of the canal basin. It is constructed of stone up to a height of 3.5 metres from the canal and brick above. At the south-east corner of the building it abuts a retaining wall for the railway embankment which is constructed out of similar stone, as is the adjacent railway bridge over an accommodation road alongside the Erewash Canal. This is an original 1839 Midland Counties Railway structure, similar to others along the route, but the canal bridge itself is a more modern steel girder structure (the contract drawings show that

this was originally a cast iron arch<sup>62</sup>). There is a modern fire escape door from the building at canal level.

#### *East elevation*

The east elevation abuts a later 2-storey building that runs along the remaining length of the canal basin. The visible part of the end elevation is of brick.

#### *Interior*

There are two main floors at canal level and railway level respectively. The lower floor is concrete, and the interior walls are lined with modern concrete blocks. The floor at railway level is timber, and interior walls are white painted brick. There is an attic floor for about half the length of the building at the West end. There are sliding wooden shutters for each of the top row of windows on both sides of the buildings. The shutters slide along wooden rails that run along the entire length of the building, except where they have been cut to allow the insertion of the two larger windows in the east elevation.

#### *Roof*

The roof structure is of timber, with timber lining and a corrugated asbestos covering.



Plate 10: Coke Store — interior and roof structure.

## DISCUSSION

This section examines the following questions:

*What was the original form of the buildings?*

*How was the process of transshipment from canal to railway achieved?*

*What is the national significance of the site?*

### **What was the original form of the buildings?**

Other than the replacement of windows and doors, and blocking of the original rear doorway, it appears that the house has undergone little external change since it was constructed in 1840. There are surviving contemporary Midland Counties Railway station houses at Loughborough and Borrowash that show similar architectural features and are also rendered, which suggests this might have been the original exterior finish.

The Coke Store has undoubtedly undergone considerable changes in its lifetime, with the blocking up of the entrance arches from the canal and other doorways. There is also the documentary evidence of rebuilding being required after a fire in 1855. The two tall windows in the south elevation are certainly later additions to give more light into the building when it was being used as a Sheet Store, and photographic evidence allows us to date the window in bay 1 to pre-1920, and that in bay 3 to between 1920 and 1965.

A more fundamental and difficult question is whether the upper stories in brick were part of the original design of 1840, or added when the building was rebuilt after the fire in 1855. The rebuilding cost at least £1,300, which would pay for a lot more than just a new roof. For comparison, 10 years later, the same builder John Wood constructed two new buildings on the site, one of which had more than twice the floor area of the reconstructed coke store, and using higher quality brick and ornate cast iron windows, for just over £2,500<sup>63</sup>. On the other hand the extra expenditure on top of replacing the roof might have been to build the two storey building which now stands alongside the basin to the east of the original Coke Store.

This is linked in to the question of how the building was used for its original purpose of transshipping and storing coke. The layout of the building we see today, with a hoist above doorways facing the canal at two levels, is a canal warehouse of Type 3 in the typology proposed by Michael Nevell<sup>64</sup> but these were generally handling merchandise rather than a bulk commodity such as coke.

The 1847 map suggests that rail access to the Coke Store was at the east end of the building at canal level. With this in mind, it is difficult to understand what purpose the upper storey to the building would have originally performed. Why hoist a bulk commodity out of a canal boat to a much higher level that is required for loading into railway wagons? This suggests that it is at least a possibility that the original Coke Store was a single storey all-stone building at canal level, and the upper storey in brick was added in 1855 with a warehouse-like layout intended for handling the materials used in the building's new role as a Sheet Store.

### **What was the transshipment process?**

For any industrial site, the most important issue to consider is the industrial process which went on there. In this case the process was the transshipment of cargo from canal

to railway. Unfortunately neither the documentary nor the field evidence gives us enough information to fully understand what this process involved.

We know or can surmise the following:

- the main traffic flow was coke transferred from canal to railway
- an average of 130 tons a week was transhipped (4 boatloads)
- between 8 and 20 porters worked on the site
- the building was a store as well as a transhipment facility
- coke deteriorates if exposed to water or is handled roughly
- a mechanical hoisting apparatus was used
- at least some of the coke was in sacks
- a railway track entered the east end of the building at canal level
- there were two entrances on the north side of the building at canal level alongside the basin
- it is uncertain whether the brick upper part of the building existed in 1840

From this evidence it seems very likely that the coke was loaded into sacks at the coke ovens, and the sacks were manhandled by porters, to load the boats at Riddings, during the transhipment to railway wagons at Long Eaton, and final offloading at Derby.

The layout of railway tracks to the east of the Coke Store on the 1847 railway plan would have allowed a rake of empty wagons to be parked on one of the tracks by a locomotive, and the wagons pushed by the porters one at a time into bay 1 of the Coke Store for loading, then pushed out to stand on the second track to await collection. Loading of sacks of coke into the wagons could be via a raised platform inside the building to the south of the railway track, or from ground level using a hoisting apparatus.

The method of unloading the boats is more difficult to work out. There seem to be two possibilities:

1. If the building was originally only a single story, then the coke sacks were simply manhandled off the boats and into the building through the canal level arches, and stored at canal level. This implies that the hoisting apparatus was used only for loading the railway wagons.
2. If the Coke Store was originally of its present height and the bricked up first floor entrances facing the basin are original, then an external hoisting apparatus could be used to lift coke sacks out of a boat. With this arrangement it is likely that the coke sacks were then stored at first floor level in the building and later dropped down into the railway wagons.

Unless some more contemporary descriptions or illustrations come to light we will probably never know the definitive answer.

### **What is the national and local significance of the site?**

The canal basin and manager's house are fairly typical structures of the early 19<sup>th</sup> century. Similar Midland Counties Railway houses survive at Borrowash and Loughborough.



The Coke Store is much more unusual. A limited number of canal and railway warehouses survive, and buildings specifically designed for transshipment between canals and railways are extremely rare. The only nearly contemporary railway/canal transshipment warehouse to survive is the Peak Forest Canal Warehouse at Whaley Bridge (1832), but this is a very different layout that accommodated a boat entirely within the warehouse, flanked by railway tracks on both sides.

From a local point of view, the Coke Store is certainly the oldest industrial building in the town of Long Eaton, and represents the beginning of the development of the railway industry as a very significant employer in the district throughout the later 19<sup>th</sup> and 20<sup>th</sup> Centuries.

### CONCLUSIONS

The Midland Counties Railway basin and Coke Store of 1840 is an unusual survival from the early days of the national railway system, when transshipment of freight from canals assumed a short-term importance because the railways did not yet penetrate some of the areas that were important originators of freight. The most significant building on the site, the Coke Store, retains original features despite 150 years of re-use for other purposes, though there are some unanswered questions about the original form of the building.

Despite this significance, the site has no form of statutory protection. It is hoped that the additional research and recording described in this article will provide the evidence to finally convince the authorities that it is worthy of listing or scheduling.

### ADDENDA — COKE OVENS AT PYE BRIDGE

During the documentary research to support the recording of the Midland Counties Railway basin and coke store at Long Eaton, it became apparent that simultaneously with the construction of the facility in Long Eaton, the company was also investing a considerable sum of money in constructing its own coke ovens. The location of these ovens that were the main source of locomotive fuel throughout the company's brief independent existence is variously described in the minute books as Riddings, Somercotes or Pye Bridge, but there is no doubt that they were adjacent to the Alfreton Iron Works and associated collieries, which were owned by the railway's Vice-Chairman James Oakes.

The first reference to the coke ovens is in a Board minute of October 1839<sup>65</sup>.

*The question as to the future supply of Coke having been fully considered, and it appearing that the probable daily consumption will on the opening of the whole line be about Twenty Tons and there not being any prospect of an adequate supply of the proper quality from any parties at present manufacturing and Mr Kearsley having reported that the Coke now supplied from our own Ovens were of first rate quality, it was resolved that a sufficient number of Ovens be forthwith erected at the Riddings Colliery, under the direction of Mr Woodhouse, to afford the requisite supply of Coke for the purposes of the Railway at the General opening.*

The coke ovens were constructed and operated by William Sylverwood. For the construction he was paid a total of £3,993 in 7 instalments<sup>66</sup>. Bricks for the coke ovens

were bought from Francis Rufford<sup>67</sup>. From July 1840, Sylverwood paid a rent of £150/year, and agreed to supply coke for 3 years at price of 17s/ton provided consumption was at least 150tons/week<sup>68</sup>. As the coal for coking came from the Riddings Collieries belonging to James Oakes, Sylverwood must have been buying the coal from Oakes, or managing the operation on his behalf.

A history of Riddings published in 1884–1890<sup>69</sup> mentions the charitable activities of a Mrs Silverwood who was wife of a manager of the Alfreton Ironworks and died 1852. The 1841 census lists Ann Sylverwood aged 65 and William Sylverwood aged 35, living together in Somercotes, so it looks likely that William was the son of a former manager of the Oakes ironworks.

The coke ovens were constructed on land that did not belong to the railway company, and it was not until November 1842 that a tenancy arrangement with James Oakes was agreed as follows<sup>70</sup>:

*Mr Dicey reported that he Mr Ellis and Mr Waters had visited the Coke Ovens and had made the following agreement with Mr Oakes for the Tenancy of the Coke Ovens at Riddings.*

- *The Company to pay the sum of Ten pounds annually for the rent of the ground upon which the 30 Ovens stand facing the Cromford Canal. To be a yearly occupation subject to six months notice on either side.*
- *To have a Lease for 21 years of the ground on which the remaining 70 stand at an annual rent of £20.*
- *The Company to be at liberty to remove the Ovens at the expiration of their tenancy.*
- *The rent to commence from the time of occupation .*

*Ordered that the above terms be approved and that a Lease and an Agreement on the above conditions be forthwith prepared and executed.*

From this minute it appears that there were two separate groups of coke ovens. The larger group of 70 ovens was on land owned by Oakes on which he was prepared to grant a 21 year lease. These were presumably on the ironworks site to the west of the Pinxton branch of the Cromford Canal. The smaller group of 30 appear to have been on land occupied by Oakes but owned by a Mr Hall who was the principal landowner on the east side of the canal.

At about the same time the ovens facing the canal were the subject of a dispute between the railway and canal companies. The operation of the coke ovens had destroyed the hedge alongside the canal towpath. The canal company asked for £30 to build a stone wall, and the railway offered £15 for a fence. After 12 months of correspondence they compromised on £20, which was paid in December 1843<sup>71</sup>.

The legal status of the ovens on Hall's land seem to have given the railway some concern, and in 1844 this was resolved by Oakes buying the ovens from the railway<sup>72</sup>. On this occasion the number of ovens was given as 34. As part of the deal he gave the company a guarantee against any claims from Hall. Oakes paid £350 for the ovens and rented them back to the railway for £20/year (in addition to the £10/year ground rent) for as long as they continued to make coke using the coal from Riddings Colliery.

Buying this bank of ovens was not a very good investment for Oakes. After the amalgamation that created the Midland Railway, the new management turned to other sources of coke when Sylverwood's contract expired at the end of September



1844, leaving Oakes with a bank of coke ovens and no customer for the product. The only consolation for Oakes was that the railway was locked into a 21 year lease for the land on which the other 70 ovens were built. The Midland Railway Board minutes refer to discussions with Oakes over the future of these ovens, but no conclusion is reported<sup>73</sup>.

The final mention of coke ovens at Riddings in the Midland Railway records is in April 1853 when a Mr Gee of Nottingham offered to purchase them for £100 and remove the old materials. There must have been some doubt as to whether the ovens in question were railway property as the Way & Works Committee agreed to sell but subject to a check to confirm that they were indeed the owners<sup>74</sup>.

The coke ovens do not appear on the 1880 Ordnance Survey 25 inch to the mile map, which is the first large scale map available for the area. From the documentary evidence, it is very likely that the 70 ovens on Oakes' land were on the West side of the Pinxton branch of the Cromford Canal, and the 34 ovens on Hall's land were on the East side of the canal (adjacent to the canal towing path).

Coke ovens were typically constructed in single or double rows. The best surviving example in Derbyshire is at Summerley, near Dronfield in the North-East of the county, which comprises 48 ovens in a double row, 107 metres long by 10 metres wide<sup>75</sup>. If the ovens at Riddings were of similar dimensions, then it is likely that they

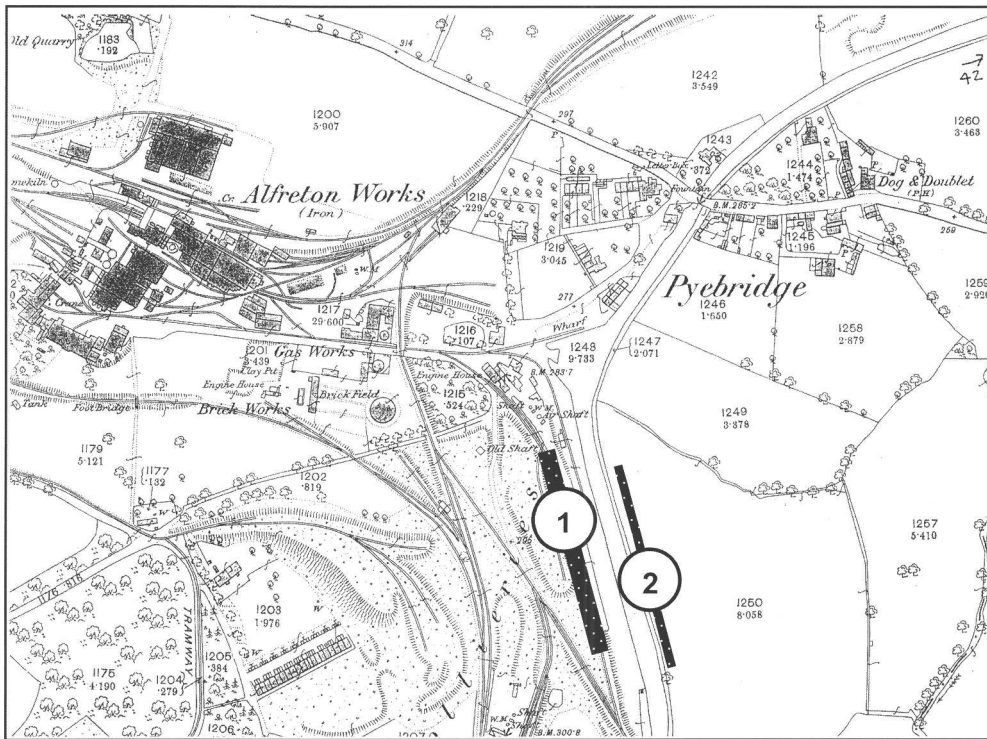


Fig. 3: Pye Bridge — 1880 map overlaid with putative position of coke ovens  
 (1) 70 ovens on Oakes' land (150 metres)  
 (2) 34 ovens on Hall's land (150 metres by 10 metres)

were constructed as a double row of 70 and a single row of 34, which would make each row about 150 metres long

An examination of the area in 2007 failed to find any positive evidence of the coke ovens. The area (1) on the west bank of the canal is covered in colliery and ironworks waste heaps, which have buried the original land surface. The area (2) on the west side of the canal was occupied by 1900 by a linear feature associated with the Alfreton Rural District Council sewage farm that was established in the adjacent field. In the late 20<sup>th</sup> century this feature was buried when the canal was filled in using colliery waste.

#### NOTES AND REFERENCES

- <sup>1</sup> For a more general history of the railway, see Stevenson, P., *The Midland Counties Railway* (1989).
- <sup>2</sup> The National Archives (TNA) RAIL 490/13 556
- <sup>3</sup> TNA RAIL 490/13 550, 582, 597
- <sup>4</sup> TNA RAIL 490/13 386
- <sup>5</sup> TNA RAIL 490/11 1295
- <sup>6</sup> TNA RAIL 490/13 579
- <sup>7</sup> TNA RAIL 490/13 616
- <sup>8</sup> TNA RAIL 490/13 635
- <sup>9</sup> TNA RAIL 490/13 636
- <sup>10</sup> TNA RAIL 490/13 659
- <sup>11</sup> TNA RAIL 490/14 700, 707; RAIL 490/9 717, 729
- <sup>12</sup> TNA RAIL 490/14 676
- <sup>13</sup> TNA RAIL 490/14 697
- <sup>14</sup> TNA RAIL 490/9 744
- <sup>15</sup> Derbyshire Record Office, Railway Deposited Plan for New Junction at Trent Q/RP2/80.
- <sup>16</sup> TNA RAIL 490/09 710
- <sup>17</sup> For the six months to December 1841, expenditure on coke was £5050 out of a total expenditure on provision of locomotive power, including wages, of £13,855 [TNA RAIL 490/10 845]
- <sup>18</sup> TNA RAIL 490/14 677
- <sup>19</sup> Swanwick was originally appointed as Principal Clerk for the MCR's Derby Station at £150/year in 1838 [RAIL 490/03 83]. This role may have become redundant when it was agreed that the North Midland Railway would operate the joint station in Derby, which would explain the MCR offering him an unusually high salary for the less responsible post at Long Eaton.
- <sup>20</sup> TNA RAIL 490/14 695
- <sup>21</sup> TNA RAIL 490/14 703
- <sup>22</sup> 1841 Census of parish of Long Eaton, transcribed by Keith Reedman.
- <sup>23</sup> TNA RAIL 490/11 1257, 1343. The reason why Fletcher was selected for redundancy may well have been an incident a few months before [RAIL 490/11 1128] where it was reported that "*Complaint having been made of Mr Fletcher having attempted to get upon an Engine attached to a train and of his having got out of a Carriage and run across the tops of the Carriages to the engine whilst the train was running at full speed. Mr Fletcher was called in, examined and warned that if any further complaint were made against him he must leave the service of the Company*". At least Fletcher was given a testimonial [TNA 490/11 1317] and £5 on consideration of having left his house at short notice [TNA RAIL 490/12 1460]

- 24 TNA RAIL 490/9 718
- 25 TNA various entries in RAIL 490/9, 490/11, 490/12.
- 26 TNA RAIL 490/11 1257
- 27 TNA RAIL 490/11 1219
- 28 TNA RAIL 490/04 727
- 29 TNA RAIL 490/11 1344 — it is not clear whether this store was ever constructed at the south-east corner of the basin; the 1847 map shows a small building nearer to the north-east corner
- 30 For April 1843, £373.7.0d to Sylverwood for coke, £57.1.6d to Thomas Horsley, and £12.8.0d to James Foulds for carriage TNA RAIL 490/4 839
- 31 The two boats were built by Joseph Henson of Loughborough in 1841 at a cost of £280 [RAIL 490/9 816], and had a capacity of approximately 30 tons each. Their details are recorded in the Trent Navigation Boat Tables, TNA RAIL 879/77 1609, 1610
- 32 TNA RAIL 828/2
- 33 TNA RAIL 490/11 1006
- 34 TNA RAIL 490/12 1484
- 35 TNA RAIL 490/5 1270
- 36 Personal communication from Hugh Potter
- 37 Owned by J & W Soresby of Cavendish Bridge, and by the Butterley Iron Works, TNA RAIL 879/77 1612, 1613
- 38 TNA RAIL 490/11 880
- 39 TNA RAIL 490/05 — meeting on 10/06/1844, item 13
- 40 TNA RAIL 490/12 1441
- 41 Gough, J., *The Midland Railway — a Chronology* (1989).
- 42 TNA RAIL 491/14 1028
- 43 Stevenson, P, *The Nutbrook Canal Derbyshire* (1970), p78.
- 44 TNA RAIL 491/32 207, 299
- 45 Sylverwood built the coke ovens for the MCR in 1839–1840, and was then given a contract to supply coke for 3 years [TNA RAIL 490/3 236]. In 1843 the MCR invited tenders from alternative suppliers, and conducted a test in three locomotives with samples of coke from 4 suppliers. The coke from Riddings gave the best results, and was competitive on price, and Sylverwood was given a contract for another year [TNA RAIL 490/4 878]. Sylverwood died within a few weeks of this contract expiring, on 28 October 1844 [Derby Mercury, 6 November 1844].
- 46 The boats were sold for £200 to the Butterley Company. TNA RAIL 491/13 255, 269
- 47 1851 Census of parish of Long Eaton, transcribed by Keith Reedman.
- 48 TNA RAIL 491/92 2558
- 49 TNA RAIL 491/92 2828
- 50 TNA RAIL 491/92 2868
- 51 TNA RAIL 491/92 2898
- 52 Nottingham Review, 18 January 1855, transcribed by Keith Reedman.
- 53 TNA RAIL 491/140 4830
- 54 TNA RAIL 491/44 4867, 5063
- 55 TNA RAIL 491/92 3314
- 56 TNA RAIL 491/92 3323
- 57 There were payments on account of £600 to Wood and £700 to Thompson specifically relating to the Sheet Stores between April and June 1855 [TNA RAIL 491/44 4898, 4949, 5003], but it is likely that this was not the full cost as there are other non-specific payments to Wood and Thompson in the following months.

- <sup>58</sup> For a description of the activities undertaken at the Sheet Stores, including contemporary descriptions and photographs from 1900 and 1925, see Essery, Bob, *Sheets, Ropes and Sacks*, Midland Record No.3, Wild Swan Publications (1995)
- <sup>59</sup> TNA RAIL 491/95 6495
- <sup>60</sup> Higginson, M., *The Midland Counties Railway 1839–1989 A Pictorial Survey* (1989) figure 40
- <sup>61</sup> Derby Industrial Museum, Frank Nixon collection P212/23
- <sup>62</sup> TNA RAIL 490/21
- <sup>63</sup> TNA RAIL 491/99 10394
- <sup>64</sup> Nevell, M., *The Archaeology of the Canal Warehouses of North-West England*, Industrial Archaeology Review, Volume XXV, Number 1, May 2003
- <sup>65</sup> TNA RAIL 490/3 1841
- <sup>66</sup> TNA RAIL 490/9 604, 650, 663, 680, 692, 710. 717
- <sup>67</sup> TNA RAIL 490/9 642
- <sup>68</sup> TNA RAIL 490/3 236
- <sup>69</sup> Oakes, Thomas Haden. *A Short History of Riddings* (1884–1890)
- <sup>70</sup> TNA RAIL 490/11 1295
- <sup>71</sup> TNA RAIL 490/11 1232, 1273, 1291, 1463, RAIL 490/10 1008]
- <sup>72</sup> TNA RAIL 490/05 7 (minute numbering restarted after Midland Railway amalgamation)
- <sup>73</sup> TNA RAIL 491/013 297
- <sup>74</sup> TNA RAIL 491/91 2390
- <sup>75</sup> Battye, K., Doncaster, R., Mitchell, I, Newing D., *Summerley Colliery Coke Ovens*, Derbyshire Archaeological Journal Volume 109 (1989)